



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 30, 2019

Rebecca Hargadine  
Agent  
Orion Fomes, LLC  
12230 E Del Norte  
Yuma, AZ 85367

Subject: Registration Review Label Mitigation for Fomesafen  
Product Name: Fomesafen 1.88 Herbicide  
EPA Registration Number: 87655-3  
Application Date: 7/18/2018  
Decision Number: 555640

Dear Rebecca Hargadine:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Fomesafen Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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If you have any questions about this letter, please contact Darius Stanton by phone at 703-347-0433, or via email at [Stanton.Darius@epa.gov](mailto:Stanton.Darius@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

Fomesafen	GROUP 14	HERBICIDE
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# FOMESAFEN 1.88 HERBICIDE

For control of certain weeds in cotton, dry beans, snap beans, potatoes and soybeans

## ACTIVE INGREDIENT

Sodium salt of fomesafen

[5-[2-chloro-4-trifluoromethyl)phenoxy]-N-(methylsulfonyl)-2-nitrobenzamide.....22.1%

OTHER INGREDIENTS.....77.9%

TOTAL.....100.0%

Equivalent to 21.0% fomesafen or 1.88 pounds per gallon fomesafen

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque al alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

See Additional Precautionary Statements and Directions for Use on label.

### FIRST AID

<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

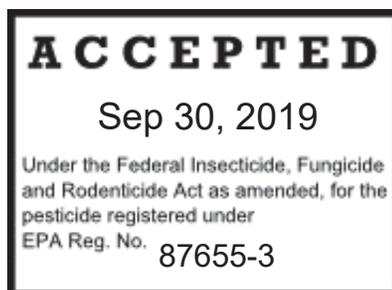
For **MEDICAL** Emergencies 24 Hours a Day Call a Poison Control Center at 1-800-222-1222.  
For **CHEMICAL** Emergency Assistance (Spill, Fire or Accident) Call ChemTrec at 1-800-424-9300  
Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

### NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

Orion Fomes, LLC  
12230 E Del Norte  
Yuma, AZ 85367-7355  
Tel. 928-503-1518

EPA Reg. No. 87655-3  
EPA Est. No.  
Net Contents: 2.5 gal



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING/AVISO**

This product contains fomesafen, which has been determined to cause tumors in laboratory mice. Risks can be reduced by closely following use directions and precautions and by wearing the protective clothing specified elsewhere on this label.

**CAUSES SKIN IRRITATION. HARMFUL IF ABSORBED THROUGH THE SKIN.**

Harmful if swallowed. Causes moderate eye irritation. Do not get on skin or on clothing. Avoid contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber or Viton
- Chemical-resistant footwear plus socks
- Chemical-resistant apron when cleaning equipment, mixing or loading

In addition, for aerial applications mixers and loaders handling more than 150 gallons of Fomesafen 1.88 Herbicide in any single workday must wear:

- Dust/mist filtering NIOSH-approved respirator with any N, R, P or HE filter.

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)]. The handler PPE requirements may be reduced or modified as specified in the WPS.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove and wash contaminated clothing before reuse.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

For Terrestrial Uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not organisms in shallow apply when weather conditions favor drift from target area.

**Surface Water Advisory**

This product may impact surface water quality due to spray drift and runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of fomesafen from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

**Groundwater Advisory**

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where permeable, particularly where the water table is shallow.

**Non-Target Organism Advisory Statement**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.**

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber or Viton.
- Chemical-resistant footwear plus socks

## SPRAY DRIFT

### Aerial Applications:

- Do not release spray at a height greater than 10ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1 ).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1 ).
- For aerial applications: Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed wing aircraft and 90% or less of the rotor diameter for helicopters. Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### Ground Boom Applications:

- User must only apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1 ).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size - Ground Boom**

- Volume- Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure- Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle- Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift

#### **Controlling Droplet Size - Aircraft**

- Adjust Nozzles- Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

**BOOM HEIGHT - Ground Boom** Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

**RELEASE HEIGHT- Aircraft** Higher release heights increase the potential for spray drift.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## **INFORMATION**

Read all label directions before using.

Fomesafen 1.88 Herbicide is a selective herbicide which may be applied preplant, preemergence or postemergence for control or partial control of broadleaf weeds, grasses and sedges in cotton, dry beans, snap beans, potatoes and soybeans.

### **Pre-plant Surface and Pre-emergence Applications**

Certain germinating broadleaf weeds, grasses and sedges can be controlled or partially controlled by soil residual activity from either pre-plant surface or pre-emergence applications of this product. Moisture is necessary to activate this product in soil for residual weed control. Dry weather following applications of this product may reduce effectiveness. When adequate moisture is not received after application of this product, weed control may be improved by overhead irrigation with at least one-fourth inch of water.

### **Postemergence Applications**

Fomesafen 1.88 Herbicide is generally most effective when used postemergence, working through contact action. Therefore, emerged weeds must have thorough spray coverage for effective control. Some bronzing, crinkling or spotting of soybean leaves may occur following a postemergence application, but soybeans soon outgrow these effects and develop normally.

Optimum weed control is achieved by postemergent applications of Fomesafen 1.88 Herbicide to young actively growing broadleaf weeds that are not under stress from moisture, temperature, low soil fertility or mechanical or chemical injury.

### **Environmental and Agronomic Conditions**

Always apply this product under favorable environmental conditions that promote active weed growth. Avoid applying this product to weeds or labeled crops which are under stress from drought, extreme temperatures, excessive water, low humidity, low soil fertility, mechanical or chemical injury as reduced weed control and/ or increased crop injury may result.

### **Rainfastness**

This product requires a 1 hour rain-free period for best results when applied post-emergence.

### **Cultivation**

Cultivation prior to post-emergence application is not recommended. Cultivation may put weeds under stress, reducing weed control. Timely cultivation 1 to 3 weeks after applying this product may assist weed control.

### **Soil Characteristics**

Application of this product to soils with high organic matter and/or high clay content may require higher rates than soils with low organic matter and/or low clay content. Refer to your regional use map for this product, the weed control tables, and specific crop use sections or directions on use rates based on soil texture.

## APPLICATION DIRECTIONS

### Application Timing

Best broad-spectrum postemergence control of susceptible broadleaf weeds is obtained when Fomesafen 1.88 Herbicide is applied early to actively growing weeds. This usually occurs within 14 to 28 days after planting. Refer to the weed control tables for specific directions on weed growth stages and rates.

### Spray Additives

Only spray additives cleared for use on growing crops under 40 CFR 180.1001 may be used in spray mixture.

For best broad spectrum postemergence control of susceptible broadleaf weeds in Regions 2, 3, 4 and 5 (see Fomesafen 1.88 Herbicide Regional Use Maps), Fomesafen 1.88 Herbicide can be used with 1.0% - 2.5% v/v liquid nitrogen (28% or similar) or a minimum of 8.5 pounds ammonium sulfate per 100 gallons of spray volume.

**For Postemergence Applications Always Add One Of The Following: Except in Tank Mix With Products Prohibiting Spray Additives (see Tank Mix Directions for Use):**

**Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO)** - Use a nonphytotoxic COC or MOS containing 15-20% approved emulsifier, at 0.5-1% v/v (2 – 4 quarts/100 gallons) of the finished spray volume. COC or MOS can improve weed control but may slightly reduce crop tolerance.

**Nonionic Surfactant (NIS)** -Use NIS containing at least 80% surface active agent at 0.25 - 0.5% v/v (1-2 quarts/100 gallons) of the finished spray volume (Region 1 and East of Interstates 79 and 77 for Regions 2 and 3).

**Other Adjuvants** -Adjuvants other than COC or NIS may be used providing the product meets the following criteria:

1. Contains only EPA exempt ingredients.
2. Is nonphytotoxic to the target crop.
3. Is compatible in mixture. (May be established through a jar test.)
4. Is supported locally for use with Fomesafen 1.88 Herbicide on the target crop through proven field trials and through university and extension recommendations.

**Note:** No adjuvants are needed for preplant surface or preemergence applications unless Fomesafen 1.88 Herbicide is being used in a burndown on emerged weeds.

### Recommended Mixing Order:

1. Fill the spray tank with half the required amount of water and begin agitation.\*
2. Add fertilizer (UAN, AMS)
3. Add dry pesticide formulations.
4. Add Fomesafen 1.88 Herbicide Herbicide.
5. Add liquid pesticide formulations.
6. Add spray adjuvant (MSO, COC or NIS).
7. Add the remaining water and maintain constant agitation.

\*Compatibility agent, 1 gallon/500 gallons of water or 0.2% v/v, may be added as needed.

## Ground Application

Use sufficient spray volume and pressure to ensure complete coverage of the target weed. A minimum spray volume of 15 gallons per acre and 30-60 psi at the nozzle tip is recommended. On large weeds and/or dense foliage, use 60 psi and a minimum of 20 gallons per acre to ensure coverage of weed foliage.

The use of flat fan nozzles will result in the most effective postemergence application of Fomesafen 1.88 Herbicide. The sprayer must be calibrated to provide the proper volume and rate per acre. In addition, the boom and nozzle height must be adjusted to provide complete coverage of target weeds.

## Band Applications

Thorough weed coverage is important for postemergence band applications. Best coverage is obtained with a minimum of two nozzles, one directed to each side of the planted row. Application with a single nozzle directed over the top of the row is not recommended for postemergence applications but is suitable for preemergence applications. Cultivation of untreated areas may be needed following band applications. When making postemergence band applications and cultivating in the same operation, position nozzles in advance of the cultivation device. This will reduce dust in the spray area. Dust can intercept spray, reducing weed coverage resulting in less than adequate weed control.

Calculate the amount of herbicide and water volume needed for band treatment by the following formulas:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{band herbicide rate per acre}$$

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast volume per acre} = \text{band water volume per acre}$$

## Aerial Application

Use sufficient spray volume and pressure to ensure complete coverage of the target. A minimum of 5 gallons per acre of spray mixture should be applied with a maximum of 40 psi pressure. When foliage is dense, use a minimum of 10 gallons per acre to ensure coverage of weed foliage.

**DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM EXCEPT CENTER PIVOT SYSTEMS.**

## CENTER PIVOT IRRIGATION APPLICATION

This product alone or in tank-mixture with other herbicides on this label, which are registered for center pivot application, may be applied in irrigation water pre-emergence (after planting but before weeds or crop emerge) at rates specified on this label. This product also may be applied post-emergence to the crop and preemergence to weeds in crops where post-emergence applications are allowed on this label. Follow all restrictions (height, timing, rate, etc.) to avoid

illegal residues. Apply this product only through a center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### **Operating Instructions**

1. The system must contain a functional check-valve, vacuum relief *valve* and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distributions are adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in 0.5 to 1 inch of water. Use the lower water volume (0.5 inch) on coarser soils and the higher volume (1 inch) on Fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

*Precautions for center pivot applications: Where sprinkler distribution patterns do not overlap*

*sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.*

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds or other public facilities not including public roads or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive area. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other locations affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

Posting required for chemigation does not replace other posting and re-entry interval requirements for farm worker safety.

### **Specific Instructions for Public Water Systems**

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, Reduced Pressure Zone (RPZ), back-flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check *valve* to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated *valve* located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

5. The system must contain functional interlocking controls to FOMA automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

### USE RESTRICTIONS

1. A maximum of 1.6 pts. of Fomesafen 1.88 Herbicide (**or a maximum of 0.375 lb. a.i./A of fomesafen from any product containing fomesafen**) may be applied per acre per year in Region 1 (see Regional Use Map).
2. A maximum of 1.6 pts. of Fomesafen 1.88 Herbicide (**or a maximum of 0.375 lb. a.i./A of fomesafen from any product containing fomesafen**) may be applied per acre in ALTERNATE years in Region 2 (see Regional Use Map).
3. A maximum of 1.3 pts. of Fomesafen 1.88 Herbicide (**or a maximum of 0.313 lb. a.i./A of fomesafen from any product containing fomesafen**) may be applied per acre in ALTERNATE years in Region 3 (see Regional Use Map).
4. A maximum of 1 pt. of Fomesafen 1.88 Herbicide (**or a maximum of 0.25 lb. a.i./A of fomesafen from any product containing fomesafen**) may be applied per acre in ALTERNATE years in Region 4 (see Regional Use Map).
5. A maximum of 0.75 pt. of Fomesafen 1.88 Herbicide (**or a maximum of 0.1875 lb. a.i./A of fomesafen from any product containing fomesafen**) may be applied per acre in ALTERNATE years in Region 5 (see Regional Use Map).
6. Do not graze treated areas or harvest for forage or hay.
7. Do not apply within 45 days of soybean harvest.

### USE PRECAUTIONS

1. Thoroughly clean the spray system with water and a commercial tank cleaner before and after each use.
2. Tank mixes of Fomesafen 1.88 Herbicide with other pesticides, fertilizers or any other additives except as specified on this label or other approved supplemental labels may result in tank-mix incompatibility, unsatisfactory performance or unsatisfactory crop injury.
3. Apply postemergence to actively growing weeds. Avoid applying Fomesafen 1.88 Herbicide to weeds or soybeans which are under stress from moisture, temperature, low soil fertility, or mechanical or chemical injury, as reduced weed control and/or increased crop injury may result.
4. Avoid overlapping spray swaths, as injury may occur to rotational crops.
5. To provide adequate coverage, it is recommended that groundspeed not exceed 10 mph during application.

### Replanting

If replanting is necessary in fields previously treated with Fomesafen 1.88 Herbicide, the field may be replanted to cotton, dry beans, snap beans or soybeans. During replanting, a minimum of tillage is recommended to preserve the herbicide barrier for effective weed control. Do not apply a second

application of Fomesafen 1.88 Herbicide or other fomesafen containing product as crop injury or illegal residues may occur in harvested crops. If tank-mix combinations were used, refer to product labels for any additional replanting instructions.

**ROTATIONAL CROP RESTRICTIONS**

The following rotational crops may be planted after applying Fomesafen 1.88 Herbicide at specified rates:

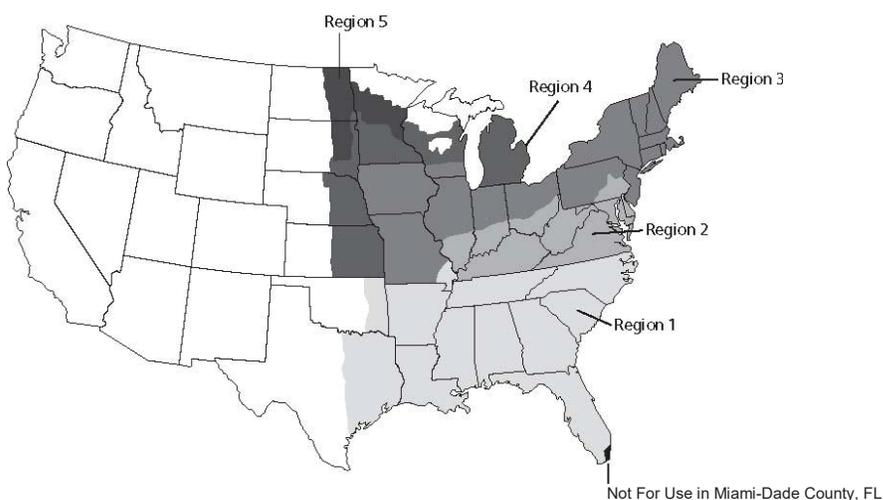
Crop to be Planted	Minimum Rotation Interval (Months After Last Fomesafen Application)
Cotton, dry beans, snap beans and soybeans	0
Small grains such as wheat, barley and rye	4
Corn*, peanuts, peas, rice and seed corn	10
To avoid crop injury do not plant alfalfa, sunflowers, sugar beets, sorghum** or any other crop within.	18
<p>*Use a 12 month minimum rotation interval for popcorn in the states of Ohio, Kentucky, Illinois, Indiana, Iowa, and Region 4 when applied at rates of 1.0 pint per acre or more. Use 18 month minimum rotation interval for sweet corn in the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont and Region 5.</p> <p>**Sorghum may be planted back after 10 months in Region 1.</p>	

Do not graze rotated small grain crops or harvest forage or straw for livestock.

**USE RATES AND WEEDS CONTROLLED**

REFER TO MAP FOR DEFINITION OF SPECIFIED GEOGRAPHIC REGIONS.

**FOMESAFEN 1.88 REGIONAL USE MAP**



**REGION 1 (Maximum Rate: 1.6 pints per acre per year)**



**REGION 1**-Includes the following states or portion of states where this product may be applied: Alabama, Arkansas, Florida (except Miami-Dade County), Georgia, Louisiana, Mississippi, Missouri (counties of Bollinger, Butler, Cape Girardeau, Dunklin, Madison, Mississippi, New Madrid, Pemiscot, Perry, Ripley, Scott, Stoddard and Wayne), North Carolina, Oklahoma (East of U.S. Highway 75 and East of Indian Nation Parkway), South Carolina, Tennessee, and Texas (includes area East of U.S. Highway 77 to State Road 239 including all of Calhoun County).

**REGION 2 (Maximum Rate: 1.6 pints per acre, alternate years)**



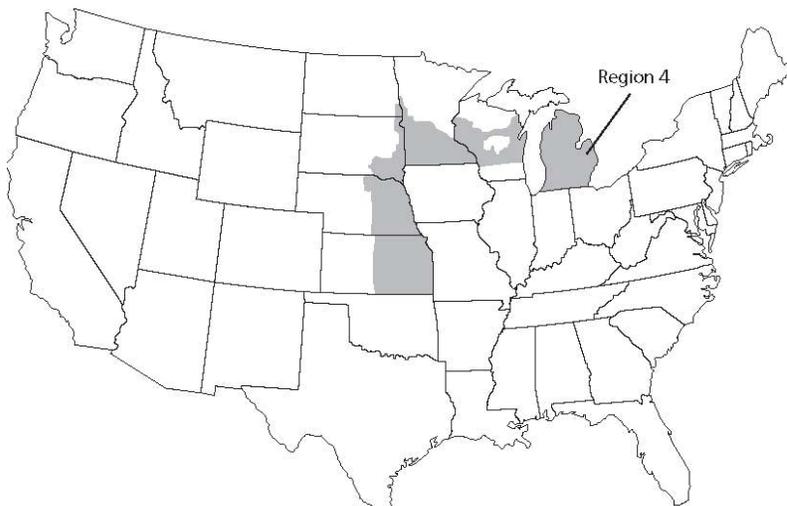
**REGION 2** -Includes the following states or portion of states where Fomesafen 1.88 Herbicide may be applied: Delaware, Kentucky, Maryland, Virginia, West Virginia, South of Interstate 70 in the following states: Illinois, Indiana and Ohio and all areas South of Interstate 80 to the intersection of U.S. Highway 15 and East of U.S. Highway 15 and U.S. Highway 522 in Pennsylvania.

**REGION 3 (Maximum Rate: 1.3 pints per acre, alternate years)**



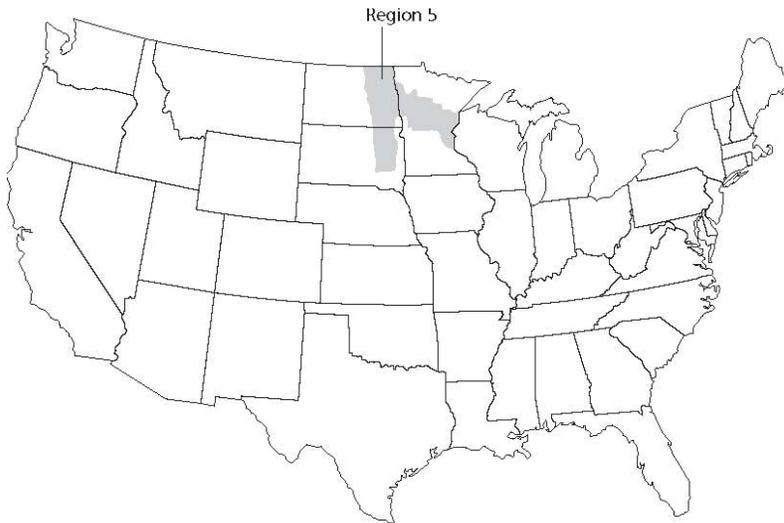
**REGION 3** -Includes the following states or portion of states where Fomesafen 1.88 Herbicide may be applied: Connecticut, Iowa, Maine, Massachusetts, Missouri (all counties except for those listed in Region 1), New Hampshire, New Jersey, New York, Pennsylvania (all areas except those listed in Region 2), Rhode Island, Vermont and Wisconsin (South of U.S. Highway 18 between Prairie Du Chien and Madison, and South of Interstate 94 between Madison and Milwaukee), and North of Interstate 70 in following states: Indiana, Illinois and Ohio.

**REGION 4 (Maximum Rate: 1 pint per acre, alternate years)**



**REGION 4** -Includes the following states or portion of states where Fomesafen 1.88 Herbicide may be applied: Kansas (all counties East of or intersected by U.S. Highway 281), Michigan (Southern Peninsula), Minnesota (all areas South of Interstate 94), Nebraska (all counties East of or intersected by U.S. Highway 281), and Wisconsin (all areas, except those in Region 3, South of Interstate 94 from Minnesota state line to Eau Claire and South of U.S. Highway 29 from Eau Claire to Green Bay plus Barron, Chippewa, Clark, Door, Dunn, Eau Claire, Kewaunee, Marathon, Menominee, Oconto, Polk, Shawano, and St. Croix counties. The following counties are excluded: Adams, Marquette, Portage, Waupaca, Waushara and Wood). North Dakota (all areas East of Interstate 29 from Fargo South to the South Dakota state line). South Dakota (all areas East of Interstate 29 from the North Dakota state line to Watertown, all areas East of Highway 81 from Watertown to Madison and all areas East and South of State Road 34 and U.S. Highway 281 to the Nebraska state line).

**REGION 5 (Maximum Rate: 0.75 pint per acre, alternate years)**



**REGION 5** -Includes the following states or portion of states where Fomesafen 1.88 Herbicide may be applied: North Dakota (all areas East of U.S. Highway 281 except those areas in Region 4), South Dakota (all areas East of U.S. Highway 281 except those areas in Region 4) and Minnesota (all areas South of U.S. Highway 2 except those areas in Region 4).

**WEEDS CONTROLLED****Table 1. Weeds controlled or partially controlled\* by pre-plant surface or pre-emergence application of this product at 1 to 1.6 pints per acre<sup>1</sup>**

<b>Broad leaf Weeds Controlled</b>	<b>Soil Texture</b>	<b>Organic Matter</b>
Amaranth, Palmer	All soil types	Up to 5%
Croton, Tropic'		
Eclipta		
<i>Galinsoga</i> , spp.		
Lambsquarters, Common		
Morningglory, Smallflower		
Nightshade, Black		
Nightshade, Eastern black		
Pigweed, Redroot		
Pigweed, Smooth		
Poinsettia, Wild		
Purslane, Common		
Ragweed, Common'		
Sida, Prickly'		
Starbur, Bristly		
<b>Broadleaf Weeds Partially Controlled*</b>		
Anoda, Spurred		
Cocklebur, Common		
Morningglory, Entireleaf		
Morningglory, Ivyleaf		
Morningglory, Pitted		
Morningglory, Red/Scarlet		
Morningglory, Tall		
Nightshade, Hairy		
Ragweed, Giant		
Waterhemp, Common		
<b>Sedges Partially Controlled*</b>		
Nutsedge, Yellow		
<p>* Partial control means significant activity but not always at a level considered acceptable for commercial weed control.</p> <p><sup>1</sup> Use the higher end of the rate range when heavy weed populations are anticipated.</p> <p><sup>2</sup> Rates less than 1.6 pints per acre will provide only partial control of this weed</p>		

**Table 2. Weeds controlled or partially controlled\* by post-emergence application of this product.**

Weed	Fomesafen 1.88 Herbicide Rate (pints per acre)			
	Maximum Growth Stage Controlled At			
	0.75 pt/A No. of True Leaves	1 pt/A No. of True Leaves	1.25 pt/A No. of True Leaves	1.6 pt/A No. of True Leaves
Anoda, spurred	--	2*	2	4
Balloonvine	--	--	2	4
Carpetweed	--	8" diameter size	unlimited size	unlimited size
Citron (wild watermelon)	--	2	4	4
Cocklebur, common <sup>a,b</sup>	2	4	6	8
Copperleaf, hophornbeam	--	4	4	6
Copperleaf, Virginia	--	4	4	6
Crotalaria, showy	--	6	6	8
Croton, tropic	--	4	4	6
Cucumber, volunteer	--	4	6	8
Eclipta	--	2	4	4
Groundcherry, cutleaf	--	4	6	8
Hemp <sup>b</sup>	--	4	6	6
Horsenettle <sup>b</sup>	--	2*	4*	4*
Jimsonweed	4	6	8	8
Ladysthumb	2*	2	4	6
Lambsquarters, common <sup>c</sup>	2*	2*	2*	2*
Mexicanweed	--	2*	2	4
Morningglory spp.:				
Cypressvine	2	4	6	6
Entireleaf var.	3	3	4	5
Ivyleaf	3*	3	4	5
Purple moonflower	3*	3	5	6
Red (scarlet)	3*	3	6	6
Smallflower	3*	3	4	6
Pitted (smallwhite)	4*	4	6	6
Tall (common)	2*	2	3	5
Palmleaf (willowleaf)	3*	3	6	6
Mustard, wild	4	6	8	8
Nightshade, black	2	4	6	6
Nutsedge, yellow	--	--	*	*
Pigweed spp.:				
Amaranth, Palmer	2	4	6	6
Amaranth, spiny	2	2	4	6
Redroot	2	4	6	8
Smooth	2	4	6	6
Waterhemp, common	2*	2	4	6
Waterhemp, tall	2*	2	4	6

## APPLICATION RATES FOR WEED GROWTH STAGES (Continued)

Weed	Fomesafen 1.88 Herbicide Rate (pints per acre) Maximum Growth Stage Controlled At			
	0.75 pt/A No. of True Leaves	1 pt/A No. of True Leaves	1.25 pt/A No. of True Leaves	1.6 pt/A No. of True Leaves
Poinsettia, wild	--	2	4	6
Purslane, common	--	multi-leaf 6" diameter	multi-leaf 8" diameter	multi-leaf 8" diameter
Pusley, Florida	--	2	2	4
Ragweed, common	4*	4	6	8
Ragweed, giant <sup>b</sup>	4*	4	6	8
Redweed	--	--	2*	3*
Sesbania, hemp	--	8	12	12
Sicklepod	--	--	cotyledon	cotyledon
Sida, prickly	--	2*	2	4
Smartweed, Pennsylvania	4*	4	6	6
Smellmelon	--	2	2	4
Spurge, prostrate	--	--	1" diameter*	1" diameter*
Spurge, spotted	--	--	2*	2*
Starbur, bristly	--	4	4	6
Sunflower, common	--	--	2	4
Velvetleaf	--	2	4	4
Venice mallow	4	6	6	8
Witchweed	--	multi-leaf up to 7"	multi-leaf up to 10"	multi-leaf up to 10"
Yellow rocket	4	4	6	8

\*suppression only

<sup>a</sup>Do not apply in cotyledon stage.

<sup>b</sup>For effective control of this weed, it is necessary to use 1% MSO and 2.5% UAN v/v as an adjuvant in Regions 2 and 3 (soybeans only).

### SPECIAL USE DIRECTIONS FOR ADDITIONAL WEED PROBLEMS

#### Suppression of Annual Grasses

The grasses listed below may be suppressed by postemergence applications of Fomesafen 1.88 Herbicide at 1-1.6 pts./A. Consult Use Rate Table for maximum rate in each region. For full-season broad-spectrum annual grass control, a tank mix with a fluzafop-P-butyl formulation is suggested. Consult tank mix section.

Barnyardgrass

Signalgrass, broadleaf

Crabgrass

Foxtail

Giant

Green

Yellow

Goosegrass

Johnsongrass, seedling

Panicum, fall

Panicum, Texas

### Partial Control\* of Perennial Weeds

Use of Fomesafen 1.88 Herbicide postemergence at rates of 1-1.6 pts./A will aid in suppressing the above-ground portions of the weeds listed below until crop canopy can assist in suppression. Perennial weeds continue to regrow from underground rootstocks even if above-ground foliage is temporarily controlled or retarded. Even though Fomesafen 1.88 Herbicide and crop competition can suppress perennial weeds for a growing season, the rootstocks will continue to live and reestablishment will occur in subsequent years.

Milkweed, climbing	Bindweed, hedge
Milkweed, honeyvine	Trumpet creeper
Bindweed, field	

\*Partial Control means significant activity but not always at a level considered acceptable for commercial weed control.

### WEED RESISTANCE MANAGEMENT

For resistance management, Fomesafen is a Group 14 herbicide (protoporphyrinogen oxidase inhibitor). Any weed population may contain or develop plants naturally resistant to Glufosinate 280 and other Group 10 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

Contact your local sales representative, crop advisor or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

Fields should be scouted prior to application to identify the weed species present and their growth to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Orion Fomes, LLC retailer, representative or call 928-503-1518 or at [www.solerasd.com](http://www.solerasd.com). If resistance is suspected, treat weed escapes with an herbicide having a different mode of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

To delay herbicide resistance, take one or more of the following steps:

- **Start with clean fields.** Plant into weed-free fields and keep fields as weed free as possible. Effective tillage or the use of a burndown herbicide program can control emerged weeds prior to planting.
- **Scout fields.**
- **Diversified approach.** To the extent possible, use a diversified approach towards weed management. Whenever possible, incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.

- **Rotate crops.** Fields with difficult to control weeds should be rotated to crops that allow the use of herbicides with alternative modes of action or different management practices.
- **Control weed escapes.** To the extent possible, do not allow weed escapes to produce seeds, roots or tubers. Manage weeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- **Clean equipment.** Prevent field-to-field and within-field movement of weed seed or vegetative propagules. Thoroughly clean plant residues from equipment before leaving fields.
- **Manage borders.** Prevent an influx of weeds into the field by managing borders.
- **Know your weeds, know your fields.** Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- **Rotate mechanisms of action.** Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action. Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. Do not use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds. If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.
- **Apply herbicide correctly.** Apply this herbicide at the correct timing and rate to control the most difficult weed in the field.

Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target weed.

For more information on Weed Resistance Management, visit the Herbicide Resistance Action Committee (HRAC) on the web at <http://www.hracglobal.com>.

## CROP USE DIRECTIONS

### COTTON

#### **Pre-emergence Application**

Apply this product 1.1 to 1.6 pints per acre as a pre-emergence application to coarse textured soils (sandy loam, loamy sand, sandy clay loam) only. Refer to Table 1 for a list of weeds controlled or partially controlled. Do not apply as a pre-emergence application to medium- or fine-textured soils as crop injury will likely occur.

#### **Pre-plant Surface Application to Medium- or Fine-Textured Soils**

Apply this product at 1.1 pints per acre as a pre-plant surface application to medium or fine-textured soils (i.e. soil types heavier than coarse textured soils) up to 21 days prior to planting cotton. Apply after the last tillage operation is completed. Refer to Table 1 for a list of weeds controlled or partially controlled. Do not exceed 1.1 pints per acre of this product on medium or fine-textured soils. Also, to avoid severe crop injury, the following directions must be followed when application is made to medium or fine-textured soils:

1. After this product application, a minimum of 0.5 inch of rainfall or overhead irrigation must occur before planting cotton.
2. Cotton must be planted at least 0.75 inch in depth. D Avoid overlapping spray swaths.
3. Do not disturb or re-work the seedbed following application.

The use of an in-furrow or seed applied fungicide will generally assist with seedling establishment and development.

Cotton plants are tolerant to pre-plant surface or pre-emergence applications of this product when applied at specified rates and application use directions. Some crinkling or spotting of cotton foliage or stunting may occur but cotton plants normally outgrow these effects and develop normally.

Cotton foliage is not tolerant to this product. Do not apply this product over the top of emerged cotton as unacceptable cotton injury will occur.

### **Post-Directed Application (All Soil Types)**

Apply this product in emerged cotton as a post-directed treatment using precision post-directed, hooded or shielded application equipment to provide complete coverage of emerged weeds. Apply this product at 1.1 to 1.6 pints per acre in a minimum of 10 gallons spray solution per acre. Applications may be made broadcast or banded. Post-directed applications of this product will provide contact control of labeled emerged weeds and residual pre-emergence control of labeled weeds (once activated by rainfall or irrigation).

Refer to the **WEEDS CONTROLLED** section for a list of weeds controlled, specified application rates, weed growth stages and application directions.

This product should be applied with a non-ionic surfactant at 0.25 to 0.5% v/v, or crop oil concentrate at 1% v/v to emerged weeds. Do not add liquid nitrogen (28% or similar) to this product or tank-mixes of this product in cotton.

Cotton foliage is not tolerant to applications of this product. Avoid contact to cotton foliage as unacceptable injury will occur. Application equipment should be calibrated (spray pressure, nozzle type and configuration and orifice size) to avoid fine spray droplets contacting green cotton stems and foliage.

### **Post-Directed Application Timing in Cotton**

This product may be applied to cotton at least 6 inches in height through lay-by as a post-directed application. All post-directed applications should avoid spray contact with any green non-barked parts of the cotton plant or foliage as unacceptable injury will occur. Follow the application timing below for post-directed applications in cotton.

#### **Shield and Hooded Applications**

Make a precision post-directed application of this product to the base of the cotton plant avoiding contact with the cotton stem or foliage when cotton is at least 6 inches in height to avoid injury. Use only hooded or shielded spray equipment to apply this product in cotton that is 6 inches to 12 inches in height. Adjust nozzles to provide full coverage of emerged target weeds.

### Lay-by Applications

Make a post-directed application of this product to the base of the cotton plant avoiding contact with any non-barked portion of the cotton plant or foliage. Use precision post-directed equipment or hooded or shielded sprayers on cotton that has developed a minimum of 4 inches of brown bark through layby. Application equipment should be configured to provide full coverage of emerged target weeds.

### Tank-Mix and Sequential Application

To broaden the weed control spectrum, this product can be tank-mixed with other herbicides as listed below. Refer to the tank-mix partner label for use directions, restrictions and limitations. The most restrictive product labeling applies.

Diuron	Metolachlor	Pyrithiobac
Fluometuron	MSMA	S-metolachlor
Glyphosate	Norflurazon	Trifloxysulfuron
Linuron	Prometryn	

### Use Restrictions - Cotton

1. Do not apply this product later than 70 days before harvest.
2. Do not apply more than 1.6 pints per acre of this product in any year.
3. Do not apply more than 1.1 pints per acre of this product as a pre-plant surface application to Medium or Fine-textured soils.

### Special Use Directions for the Suppression of Woollyleaf Bursage (*Lakeweed*), *Ambrosia grayi*, in Texas

Apply this product to cultivated areas of cropland in the fall or spring as a spot treatment at a rate of 1.6 pints per acre and incorporate to a depth of 2 to 3 inches for suppression of woollyleaf bursage. Applications should be made with ground equipment.

The use of adjuvants, as specified under the **Spray Additives** section, will significantly improve the initial burndown of any emerged woollyleaf bursage, but this effect is only temporary. Therefore, an adjuvant may be used if desired, but is not necessary.

Significant suppression may not be seen until 6 to 8 months after application, but should then continue for at least 2 years after application. Cotton or soybeans may be planted in treated areas. Under certain conditions, significant damage may occur to cotton planted within 18 months of application. A 3-year interval from last application to planting is required for all other crops.

Do not make more than one application of this product per year. Do not apply more than 1.6 pints per acre of this product in any year. If two consecutive year applications are made, allow a 2 year interval before another application.

### DRY BEANS AND SNAP BEANS

#### Pre-plant Surface and Pre-emergence Application

Apply this product as a pre-plant surface or pre-emergence application in Regions 1, 2, 3 and 4 only for control or partial control of the weeds listed in Table 1. This product can be applied alone, or tank-mixed or followed sequentially with other labeled dry bean or snap bean herbicides to broaden the weed control spectrum or control newly emerged weeds. Refer to the **Tank-Mix and Sequential Application** section for additional information.

Note: Treated soil that is splashed onto newly emerged seedlings may result in temporary crop injury but plants normally outgrow these effects and develop normally.

### Post-emergence Application

Apply this product as a post-emergent broadcast application in Regions 1, 2, 3, 4 and 5 for control or partial control of the weeds listed in Table 2 and in the **SPECIAL USE DIRECTIONS FOR ADDITIONAL WEED PROBLEMS** section. Application rate depends on weed species and growth stage. Two applications may be made if necessary but not to exceed the maximum rate specified per geographic region. (Refer to map for definition of specified geographic regions). Refer to the **Spray Additive** section for spray additives. Use of crop oil concentrate can improve weed control but may slightly reduce crop tolerance. Do not use UAN (28% or similar) or ammonium sulfate on dry beans or snap beans as severe crop injury may occur. Apply when dry beans or snap beans have at least one fully expanded trifoliolate leaf.

This product can be applied alone or in tank-mix with other labeled dry bean or snap bean post-emergence herbicides to broaden the weed control spectrum. Refer to the **Tank-Mix and Sequential Application** section.

Some bronzing, crinkling or spotting of dry bean or snap bean leaves may occur following post-emergent applications, but dry beans and snap beans soon outgrow these effects and develop normally.

### Tank-Mix and Sequential Application for Dry Beans and Snap Beans

To broaden the weed control spectrum, this product can be tank-mixed with other herbicides as listed below. Refer to the tank-mix partner label for use directions, restrictions and limitations. The most restrictive product labeling applies.

Dry Beans and Snap Beans	Dry Beans Only
Bentazon Imazamox Imazethapyr Metolachlor Pendimethalin Quizalofop Sethoxydim S-metolachlor Trifluralin	Clethodim Dimethenamid-P Ethafluralin

Under certain conditions, the mixture of this product with one or more of the above mentioned broadleaf herbicides may cause a reduction in activity of any post-emergence grass herbicide in the mixture.

For sequential applications allow 2 to 3 days after the application of the post-emergence grass herbicide before applying this product or mixtures of this product. Where this product or mixtures of this product are applied first, apply the grass herbicide when the grass weeds begin to develop new leaves (generally around 7 days).

**NOTE:** Tank-mix applications can result in increased crop injury as compared to either product used alone.

Always read and follow the directions, restrictions and limitations for all products whether used alone, sequentially or in a tank-mix. The most restrictive labeling of any product used applies.

#### **Use Restrictions - Dry Beans and Snap Beans**

1. Refer to the Regional Use Map for the maximum use rate of this product (or other Fomesafen containing products) that may be applied in each geographic region.
2. Do not apply to any field in Regions 2, 3, 4 or 5 more than once every two years.
3. **For Snap beans:** Do not exceed 1.6 pints per acre of this product in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the Regional Use Map). Do not graze treated areas or harvest for forage or hay. Do not utilize Hay or straw for animal feed or bedding. Do not apply within 30 days of harvest.
4. **For Dry beans:** Do not exceed 1.6 pints per acre of this product in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the Regional Use Map). Do not graze animals on green forage or stubble. Do not utilize hay or straw for animal feed or bedding. Do not apply within 45 days of harvest.

#### **POTATOES**

Apply this product at 1 pint per acre as a broadcast pre-emergence application after planting but before potato emergence for control or partial control of weeds listed in Table 1. Effectiveness will be reduced if later cultural practices expose untreated soil. For application by center pivot irrigation, see the **CENTER PIVOT IRRIGATION APPLICATION** section of this label.

**Note:** Potato varieties may vary in their response to this product. When using this product for the first time on a particular variety, always determine crop tolerance before using.

#### **Tank-Mixtures with Other Products Registered for Use in Potatoes**

For pre-emergence applications in potatoes, this product may be tank-mixed with other pesticide products registered for use in this way and timing in potatoes. Follow the directions for use, observe the stated precautions, and abide by the limitations and restrictions on the most restrictive of the product labels. If you have no previous experience mixing these products under your conditions, perform a compatibility test before attempting large-scale mixing.

#### **Use Restrictions - Potatoes**

1. Do not exceed 1 pint per acre of this product per season. Refer to Regional Use Map for the maximum rate of this product (or other fomesafen-containing products) that may be applied per year or alternate year in each geographic region.
2. Do not harvest potatoes treated with this product within 70 days of application.
3. Do not apply this product to sweet potatoes or yams.
4. Do not apply this product as a pre-plant incorporated application in potatoes or crop injury may occur.
5. Do not apply to emerged potato plants or severe crop injury will occur.
6. Do use on potatoes in Nassau and Suffolk Counties, New York.

#### **SOYBEANS**

##### **Pre-plant Surface and Pre-emergence Application**

Apply this product as a pre-plant surface or pre-emergence application in Regions 1, 2, 3 and 4 only for control or partial control of the weeds listed in Table 1. This product can be applied alone or tank-mixed or followed sequentially with other labeled Soybean herbicides to broaden the weed control spectrum or control newly emerged weeds. Refer to **TANK-MIX AND SEQUENTIAL APPLICATIONS** for additional information.

In reduced tillage plantings, this product can be applied up to 14 days prior to planting or at planting with a burndown herbicide.

### **Post-emergence Application**

Apply this product as a post-emergence broadcast application in Regions 1, 2, 3, 4 and 5 for control or partial control of weeds listed in Table 2 and in the **SPECIAL USE DIRECTIONS FOR ADDITIONAL WEED PROBLEMS** section. Application rate depends on weed species and growth stage. Refer to the **Spray Additives** section for recommended spray additives. To enhance post-emergence control of susceptible broadleaf weeds (**soybeans only**) in Regions 2, 3, 4 and 5 (see Regional Use Map), this product can be used with a minimum of 2.5% liquid nitrogen (28% or similar) or a minimum of 10 pounds ammonium sulfate per 100 gallons of spray volume.

This product can be applied alone or in combination with other labeled Soybean post-emergence herbicides to broaden the weed control spectrum. Refer to the **TANK-MIX AND SEQUENTIAL APPLICATIONS** section.

Some bronzing, crinkling or spotting of Soybean leaves may occur following post-emergent applications, but Soybeans soon outgrow these effects and develop normally.

### **TANK MIX AND SEQUENTIAL APPLICATIONS FOR SOYBEANS**

**To broaden the weed control spectrum, this product can be tank mixed with other herbicides as listed below. Refer to the tank mix partner for use directions, restrictions, and limitations. The most restrictive labelling applies.**

2,4-DB	Flumiclorac	Imazethapyr
Bentazon	Glufosinate	Quizalofop
Chlorimuron	Glyphosate	Sethoxydim
Clethodim	Imazamox	Thifensulfuron
Fluazifop	Imazaquin	

Under certain conditions, the mixture of Fomesafen 1.88 Herbicide with one or more of the above mentioned broadleaf herbicides may cause a reduction in activity of any grass herbicide in the mixture.

For sequential applications allow 2-3 days after the application of the grass herbicide before applying this product or mixtures of this product. Where this product or mixtures of this product is applied first, apply the grass herbicide when the grass weeds begin to develop new leaves (generally around 7 days).

### **NOTE:**

- Tank-mix applications can result in increased crop injury as compared to either product used alone.
- Do not exceed 1 fl. oz. of Butyrac per acre in mixture with Fomesafen 1.88 Herbicide.
- Do not exceed 0.25 oz./A of Synchrony STS herbicide in the tank with labeled rates of Fomesafen 1.88 Herbicide on non-STs varieties. This tank mix can be applied postemergence to any soybean variety for additional broadleaf weed control. Refer to the Synchrony STS label for more information and crop rotation restrictions.
- Always read and follow the directions, restrictions and limitations for all products whether used alone, sequentially or in a tank mix. The most restrictive labeling of any product used applies.

**GLYPHOSATE TOLERANT SOYBEAN TANK MIXES**

This product can be tank mixed with glyphosate product that are labeled for Roundup Ready (glyphosate tolerant) soybeans for improved postemergence control of many weeds such as morningglory spp., hemp sesbania, waterhemp and black nightshade which are known to have tolerance to glyphosate, but are susceptible to this product (Fomesafen).

**FOLLOW THE DIRECTIONS ON THE GLYPHOSATE PRODUCT LABEL FOR THE USE OF SPRAY ADDITIVES IN THIS TANK MIX.**

Do not allow this tank mix to move off target as contact by even minute quantities can cause severe damage or death to any non-target vegetation.

**NOTE:** Postemergence application of this tank mix on soybean varieties which do not contain the glyphosate tolerant gene will result in severe crop injury or death of the soybean crop. Always read and follow the directions, restrictions and limitations for all products used. The most restrictive labeling of any product applies.

**Product Use Restrictions - Soybeans**

- Refer to Regional Use Map for maximum rate of this product (or other fomesafen containing products) that may be applied in each geographic region. Do not apply to any field in Regions 2, 3, 4 or 5 more than once every 2 years.
- Do not exceed 1.6 pints of this product per acre in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to Regional Use Map).
- Do not graze treated areas or harvest for forage or hay.
- Do not apply within 45 days of harvest.

## APPENDIX

COMMON NAME	SCIENTIFIC NAME
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, spiny	<i>Amaranthus spinosus</i>
Anoda, spurred	<i>Adoda cristata</i>
Balloonvine	<i>Cardiospermum halicacabum</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Bindweed, hedge	<i>Calystegia sepium</i>
Broadleaf signalgrass	<i>Bracharia platyphylia</i>
Carpetweed	<i>Mullugo verticillata</i>
Citron (wild watermelon)	<i>Citrullus vulgaris</i>
Cocklebur, common	<i>Xanthium strumarium</i>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia</i>
Copperleaf, Virginia	<i>Svs;ufjs bothomovs</i>
Crabgrass	<i>Digitaria spp.</i>
Crotalaria, showy	<i>Crotalaria spectabilis</i>
Croton, tropic	<i>Croton glandulosus</i>
Cucumber, volunteer	<i>Cucumis sativas</i>
Eclipta	<i>Eclipta prostrate</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Groundcherry, cutleaf	<i>Physalis angulate</i>
Hemp	<i>Cannabis sativa</i>
Horsenettle	<i>Solanum carolinense</i>
Jimsonweed	<i>Datura stramonium</i>
Johnsongrass, seedling	<i>Sorghum halapense</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Mexicanweed	<i>Caperonia castanifolia</i>
Milkweed, climbing	<i>Sarcostemma cyanchoides</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Morningglory:	
Cypressvine	<i>Ipomoea quamoclit</i>
Entireleaf var.	<i>Ipomoea hederacea</i> var. <i>intergriuscula</i>
Ivyleaf	<i>Ipomoea hederacea</i>
Purple moonflower	<i>Ipomoea turbinata</i>
Red (scarlet)	<i>Ipomoea coccinea</i>
Smallflower	<i>Jacquemontia tamnifolia</i>
Pitted (smallwhite)	<i>Ipomoea lacunose</i>
Tall (common)	<i>Impmoea purpurea</i>
Palmleaf (willowleaf)	<i>Impmoea wrightii</i>
Mustard, wild	<i>Sinapis arvensis</i>

COMMON NAME	SCIENTIFIC NAME
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum ptychanthum</i>
Nightshade, hairy	<i>Solanum physalifolium</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Pigweed:	
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, spiny	
Redroot	<i>Amaranthus retroflexus</i>
Smooth	<i>Amaranthus hybridus</i>
Poinsettia, wild	<i>Euphorbia heterophylla</i>
Purslane, common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Ragweed, common	<i>Ambrosia artemisifolia</i>
Ragweed, Giant	<i>Ambrosia trifida</i>
Redweed	<i>Melchia corchorifolia</i>
Sesbania, hemp	<i>Sesbania exaltata</i>
Sicklepod	<i>Senna obtusifolia</i>
Sida, prickly	<i>Sida spinose</i>
Signalgrass, broadleaf	<i>Bracharia platyphylla</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Smellmelon	<i>Cucumis melo</i>
Spurge, prostrate	<i>Chamaesyce humistrata</i>
Spurge, spotted	<i>Chamaesyce maculate</i>
Starbur, bristly	<i>Acanthospermum hispidum</i>
Sunflower, common	<i>Helianthus annuus</i>
Trumpet creeper	<i>Campis redicans</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Venice mallow	<i>Hibiscus trionum</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
Witchweed	<i>Striga asiatica</i>
Yellow rocket	<i>Barbarea vulgaris</i>

## **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

### **Prohibitions**

Open dumping is prohibited. Do not reuse empty container.

### **Pesticide Storage**

Store above 32°F in original containers only. If product freezes, return to room temperature and agitate to reconstitute. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

### **Pesticide Disposal**

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

### **Container Handling for Containers Less than 5 Gallons**

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### **Container Handling for Bulk and Mini-Bulk Containers**

Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application or rinsate collection system. Repeat this rinsing procedure 2 more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities. If the container is damaged, leaking or obsolete, contact Orion Fomes, LLC at 928-503-1518.

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

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